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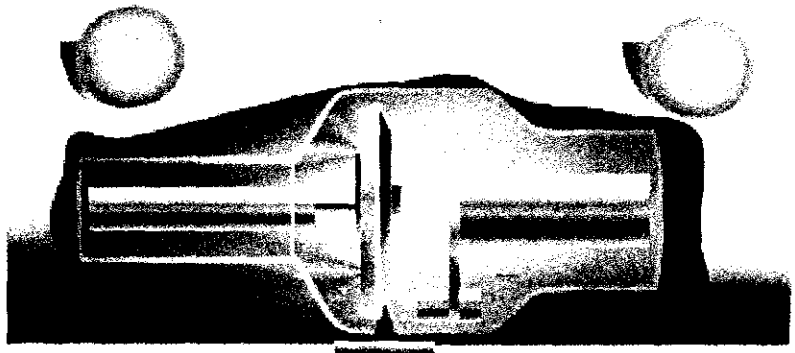
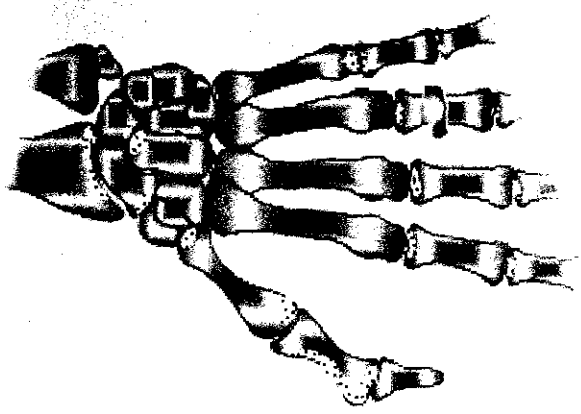
4 Cochran Road Solon, Ohio 44139
(440) 519-1555 Fax (440) 519-1556

DITECnet.com
info@DITECnet.com



Philips Medio X-Ray Controls Maintenance Course



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SIX-TIME WINNERS of *24x7* Readers' Choice Award
Best Service Training Program or Aid - Diagnostic Imaging Maintenance Levels I, II, III

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TECHNICAL DATA

	MEDIO 30 CP-H	50 CP-H	65 CP-H
	380 .5 ohm	.3 ohm	.2 ohm
	440 .5 ohm	.3 ohm	.2 ohm
	480 .5 ohm	.3 ohm	.2ohm
Line Reg.	15%	13%	13%
Output	400mA at 80KV	600mA at 80KV	700mA at 85KV
	320mA at 100KV	500mA at 100KV	650mA at 100KV
	200mA at 150KV	320mA at 150KV	400mA at 150KV
KV Ctrl	High Frequency	High Frequency	High Frequency
Fil Ctrl	High Frequency	High Frequency	High Frequency
KV Range	40KV to 150KV	40KV to 150KV	40KV to 150KV
mA Range	5mA to 400mA	5mA to 600mA	5mA to 700mA
mAs Range	1mAs to 850mAs	1mAs to 850mAs	1mAs to 850mAs
Time Range	3 ms to 6 sec	3 ms to 6 sec	3 ms to 6 sec
AEC Time	3 ms to 4 sec	3 ms to 4 sec	3 ms to 4 sec
Fluoro KV	40KV to 110KV	40KV to 110KV	40KV to 110KV
KV Accuracy	+/- 5% +/- 2KV	+/- 5% +/- 2KV	+/- 5% +/- 2KV

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	MEDIO 30 CP-H	50 CP-H	65 CP-H
mA Accuracy	+/- 15% +/- 1mA	+/- 15% +/- 1mA	+/- 15% +/- 1mA
mAs Accuracy	+/- 15% +/- 1mAs	+/- 15% +/- 1mAs	+/- 15% +/- 1mAs
Timer Accuracy	+/- 2% +/- 1ms	+/- 2% +/- 1ms	+/- 2% +/- 1ms
Fluoro KV	+/- 5% +/- 2KV	+/- 5% +/- 2KV	+/- 5% +/- 2KV
Fluoro mA	+/- 10% +/- .1mA	+/- 10% +/- .1mA	+/- 10% +/- .1mA
Tubes	RO Only	RO or SRO	RO or SRO

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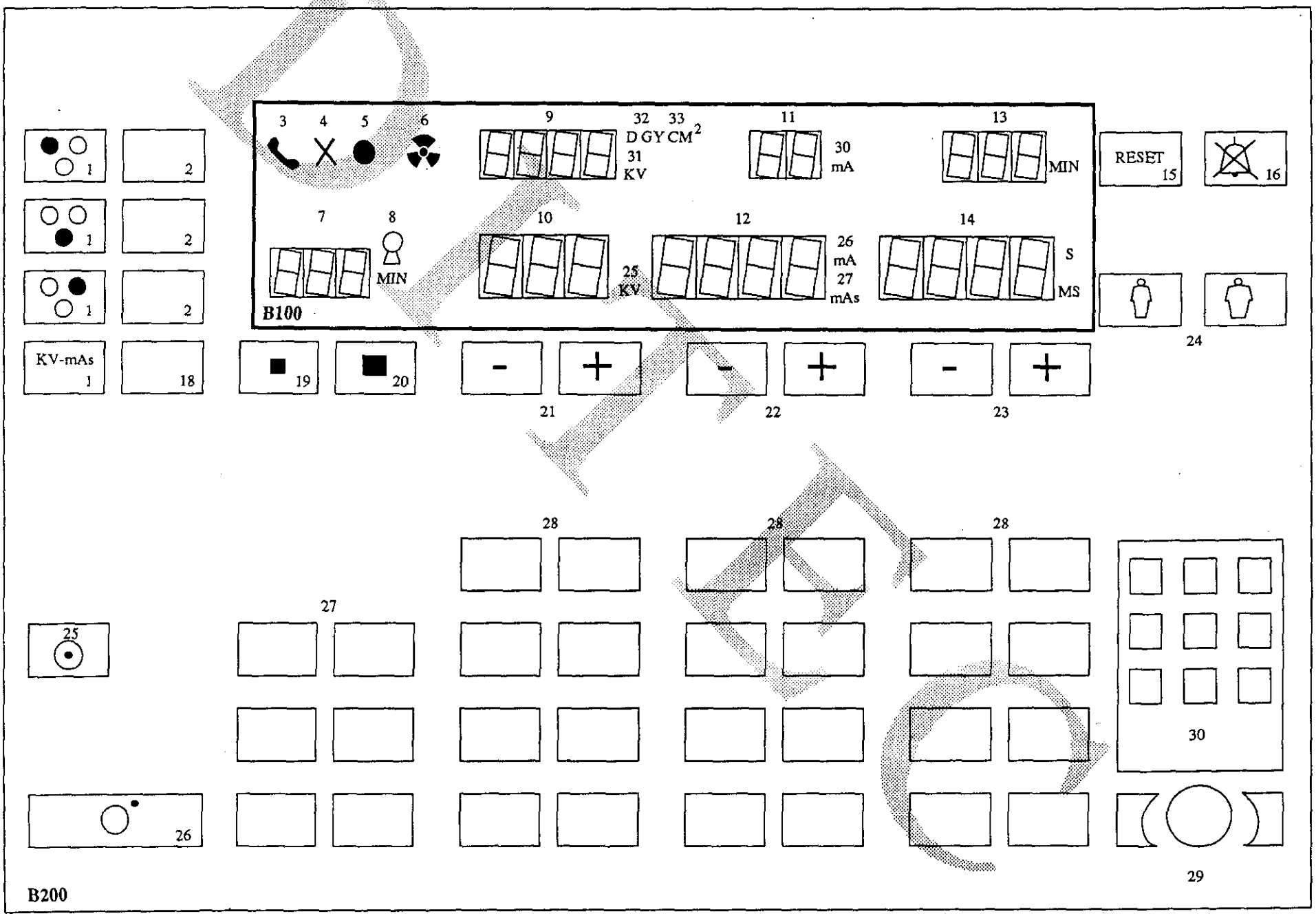
CONTROL MODULE



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CONTROL MODULE SWITCH FUNCTIONS

1. AMPLIMAT measuring field buttons
2. Film/screen buttons
3. Service symbol
4. Faulty exposure indication
5. "Ready indication"
6. X-ray "on" indication
7. Density display
8. Tube housing heat limit
9. Display of fluoroscopic KV
10. Display of radiographic KV
11. Display of fluoroscopic mA
12. Display of mA or mAs; depending upon the technique concerned
13. Display of fluoroscopic time (min.)
14. Display of radiographic exposure time (ms)
15. Reset button for:
    Fluoroscopic time
    Faulty exposure indication
16. Reset button for audible signal "RESET BUZZER"
17. Technique selection (KV-mAs)
18. Technique selection "fixed current" (KV-mA-ms)
19. Small focus
20. Large focus
21. Plus/minus buttons for KV (radiography)
22. Plus/minus buttons for mA/mAs (radiography)
23. Plus/minus buttons for ms (radiography)
24. Patient thickness compensation buttons (+ or - PTC)
25. Generator "ON"
26. Generator "OFF"

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27. Exam/aux unit buttons (LD: technique buttons)
28. APRT buttons
29. Preparation/exposure switch
30. The protective cover conceals 9 buttons for generator program setting

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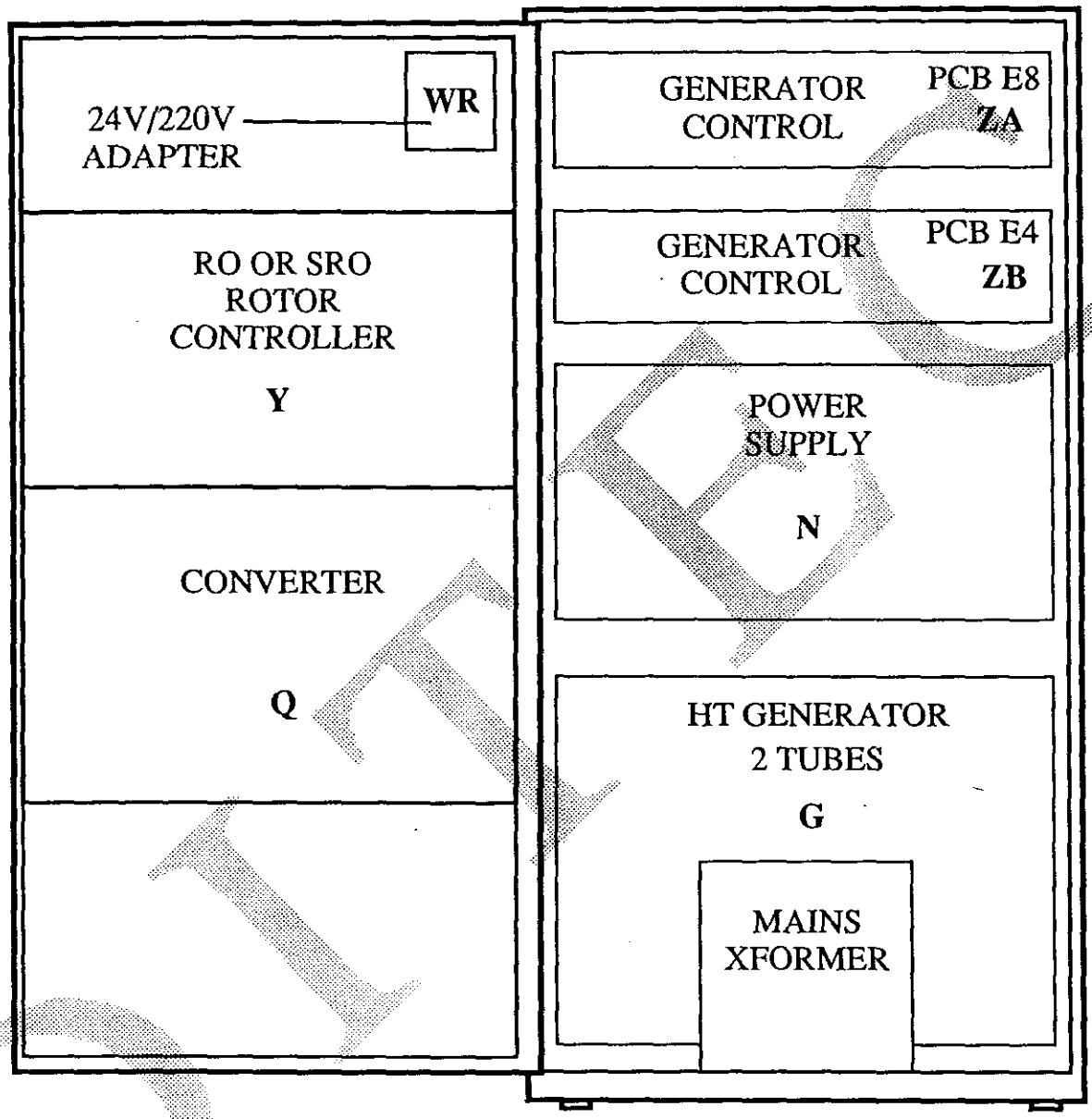

PHILIPS MEDIO 30/50/65 X-RAY CONTROL
E CABINET LAYLOUT
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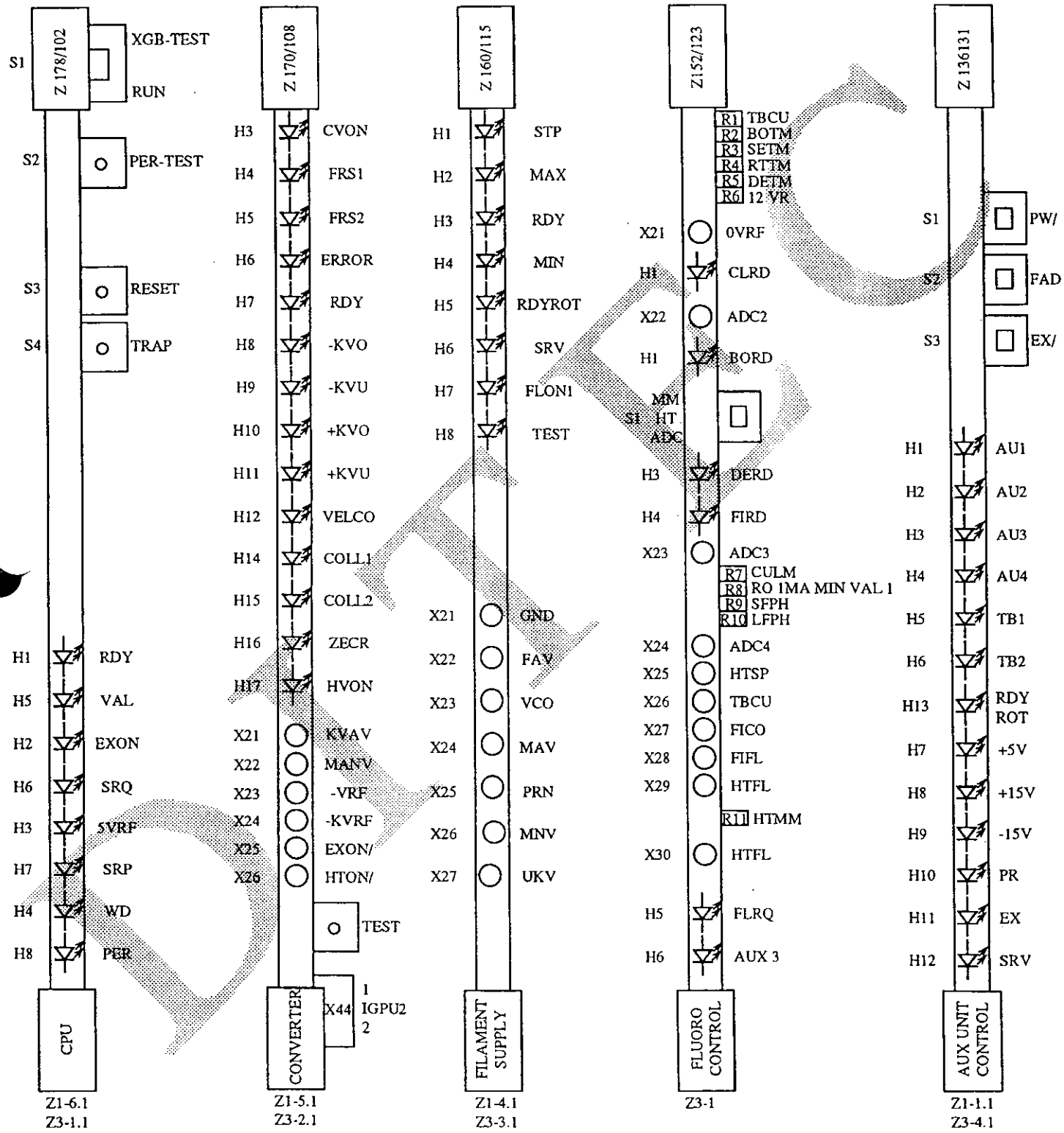
PHILIPS MEDIO CENTRAL ELECTRONIC LAYOUT



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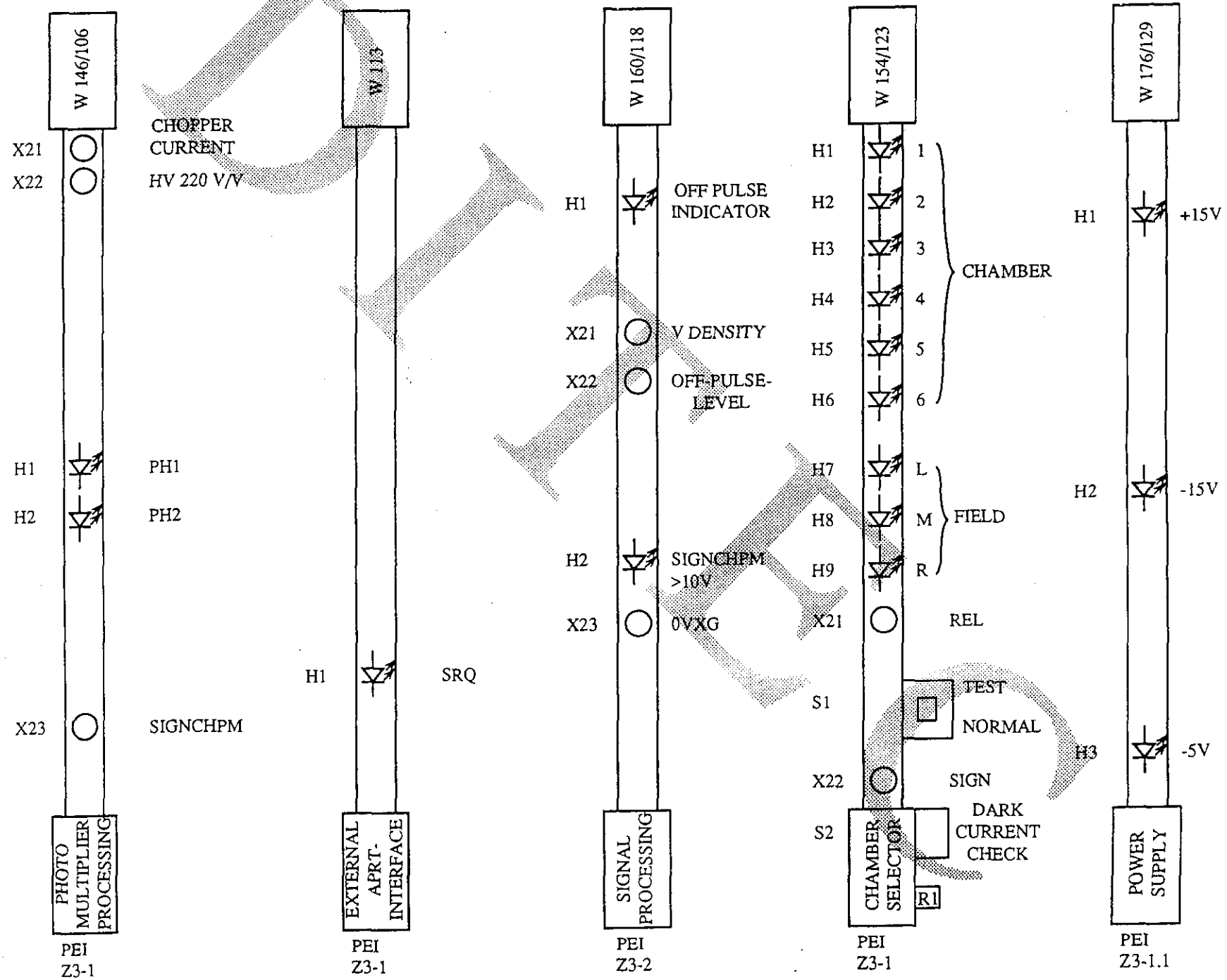
PHILIPS MEDIO OPT[illegible]N RACK LAYOUT



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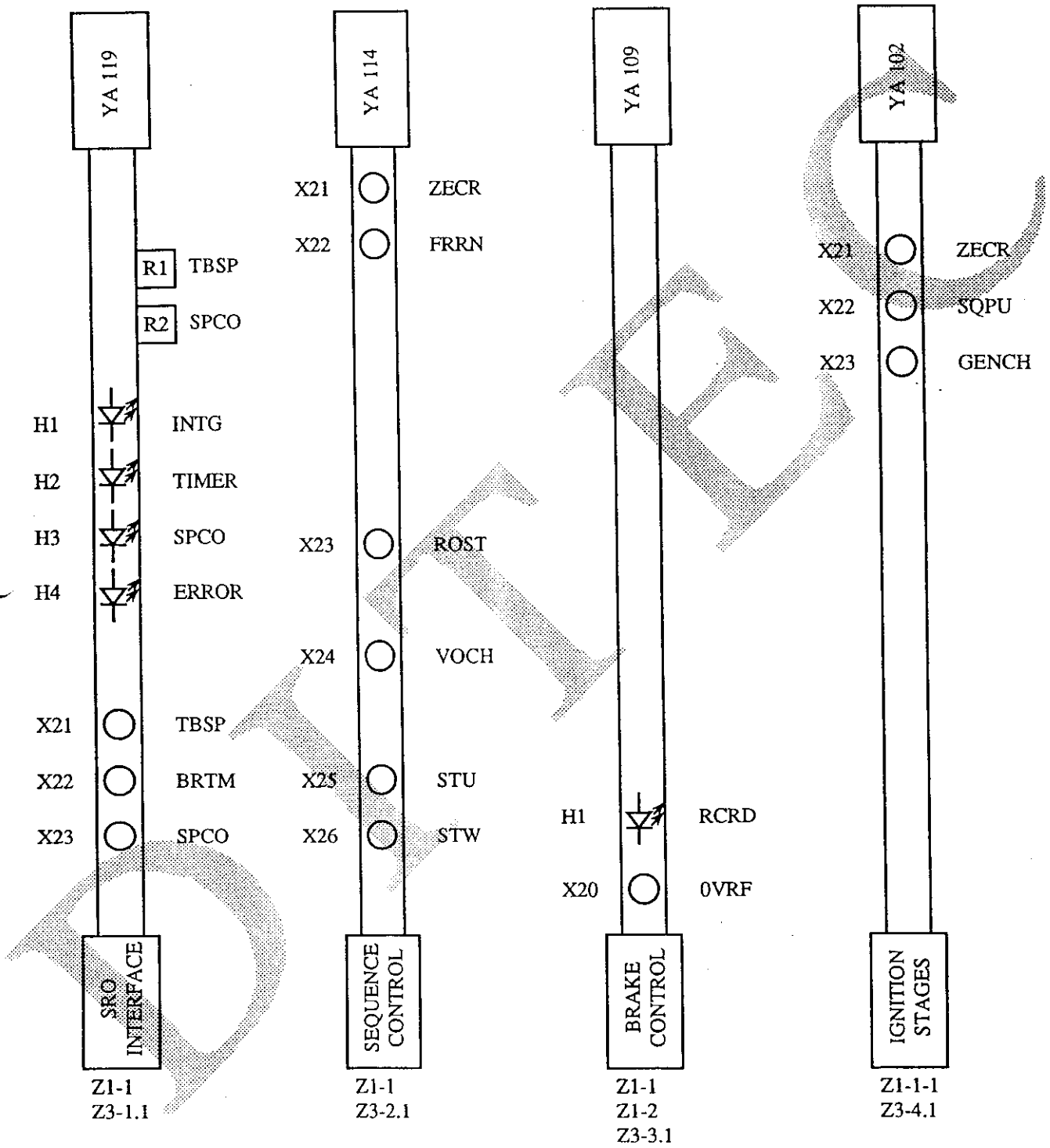
PHILIPS MEDIO SRO ROTOR CONTROL LAYOUT



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LED INDICATIONS

BOARD #	BOARD NAME	INDICATION	MEANING
ZA136	AUX	PW (SWITCH)	PREPARATION WITHOUT POWER
	UNIT	FAD (SWITCH)	FILAMENT ADJUST
	CONTROL	EX (SWITCH)	NO EXPOSE REQUEST
		H1 (YELLOW)	AUX 1 SELECT
		H2 (YELLOW)	AUX 2 SELECT
		H3 (YELLOW)	AUX 3 SELECT
		H4 (YELLOW)	AUX 4 SELECT
		H5 (YELLOW)	TUBE 1 SELECT
		H6 (YELLOW)	TUBE 2 SELECT
		H7 (YELLOW)	+5 VOLT SUPPLY
		H8 (YELLOW)	+15 VOLT SUPPLY
		H9 (YELLOW)	-15 VOLT SUPPLY
		H10 (YELLOW)	PREP ON
		H11 (YELLOW)	EXPOSE ON
		H12 (RED)	SERV. ON IF,PW,FAD,EX SELECTED
		H14 (YELLOW)	AUX 5 SELECT
ZA160	FILAMENT	H3 (GREEN)	FILAMENT READY
		H6 (RED)	SERVICE MODE VIA W1
		H4 (RED)	MINIMUM FILAMENT
		H2 (RED)	MAXIMUM FILAMENT
		H1 (RED)	FILAMENT STOP

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BOARD #	BOARD NAME	INDICATION	MEANING
ZA178	CENTRAL PROCESSOR UNIT	H1 (GREEN)	CPU READY
		H5 (GREEN)	DATA VALID
		H2 (YELLOW)	EXPOSE ON
		H6 (GREEN)	SERVICE REQUEST
		H3 (RED)	5 VOLT REFERENCE
		H7 (GREEN)	SERVICE RESPONSE
		H4 (RED)	WRITE
		H8 (GREEN)	PERFORM
YA119	SRO INTERFACE	H1 (YELLOW)	IGNITION
		H2 (YELLOW)	TIMER
		H3 (YELLOW)	SET POINT READY
		H4 (RED)	ERROR IN ROTOR POINT
YA109	BRAKE CONTROL	H1 (GREEN)	ROTOR CONTROL READY
			ON-STANDBY
			OFF-ACCEL
			ON-FREE RUN
ZB160	SIGNAL PROCESSING	H1 (YELLOW)	OFF PULSE
		H2	SIGNAL,CHECK > 10V

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BOARD #	BOARD NAME	INDICATION	MEANING
ZB154	CHAMBER SELECTION	H1 (YELLOW)	CHAMBER SELECTED
		H2 (YELLOW)	CHAMBER 2 SELECTED
		H3 (YELLOW)	CHAMBER 3 SELECTED
		H4 (YELLOW)	CHAMBER 4 SELECTED
		H5 (YELLOW)	CHAMBER 5 SELECTED
		H6 (YELLOW)	CHAMBER 6 SELECTED
		H7 (YELLOW)	LEFT FIELD
		H8 (YELLOW)	MIDDLE FIELD
		H9 (YELLOW)	RIGHT FIELD

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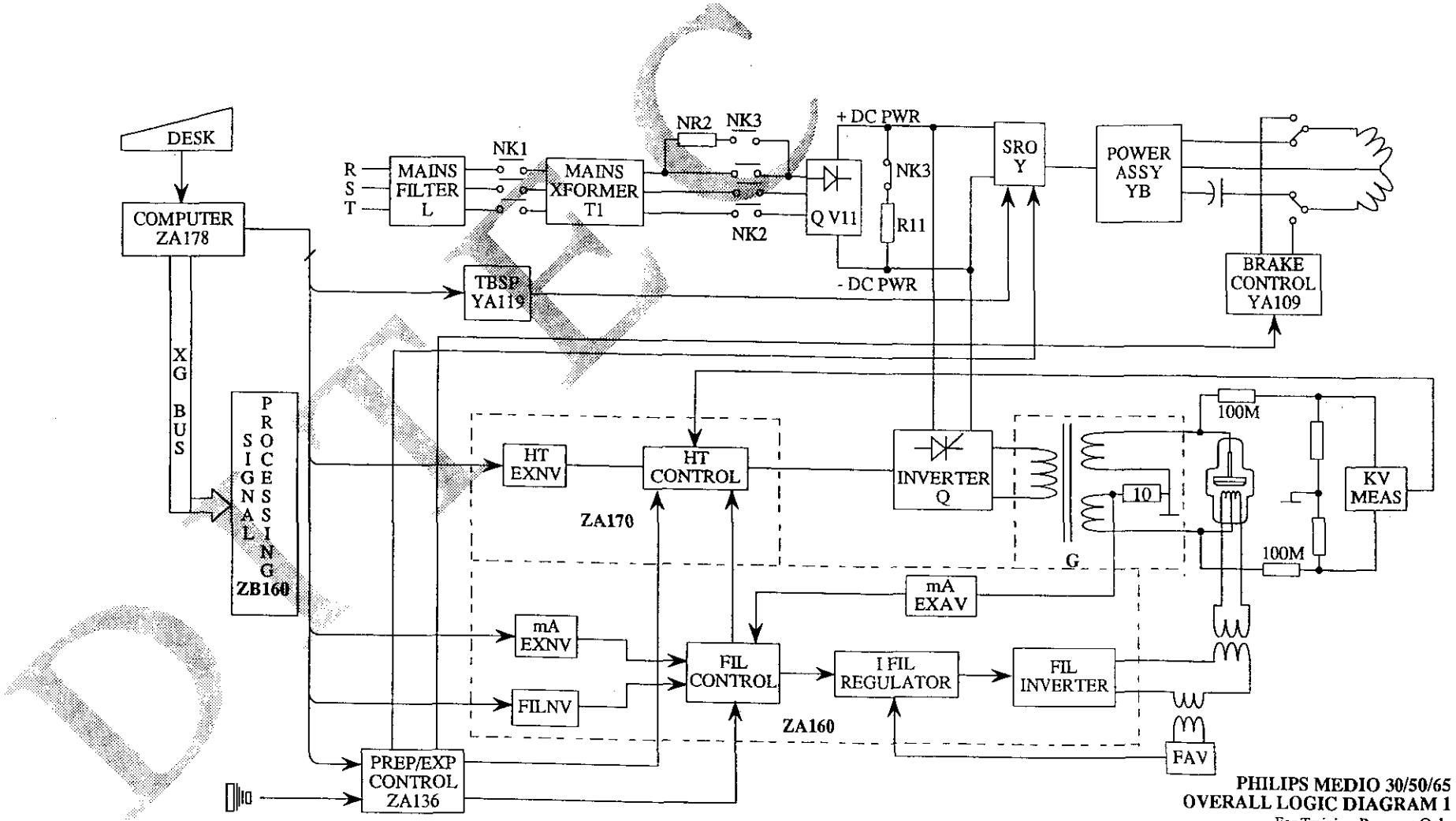

PHILIPS MEDIO 30/50/65
OVERALL LOGIC DIAGRAM 1

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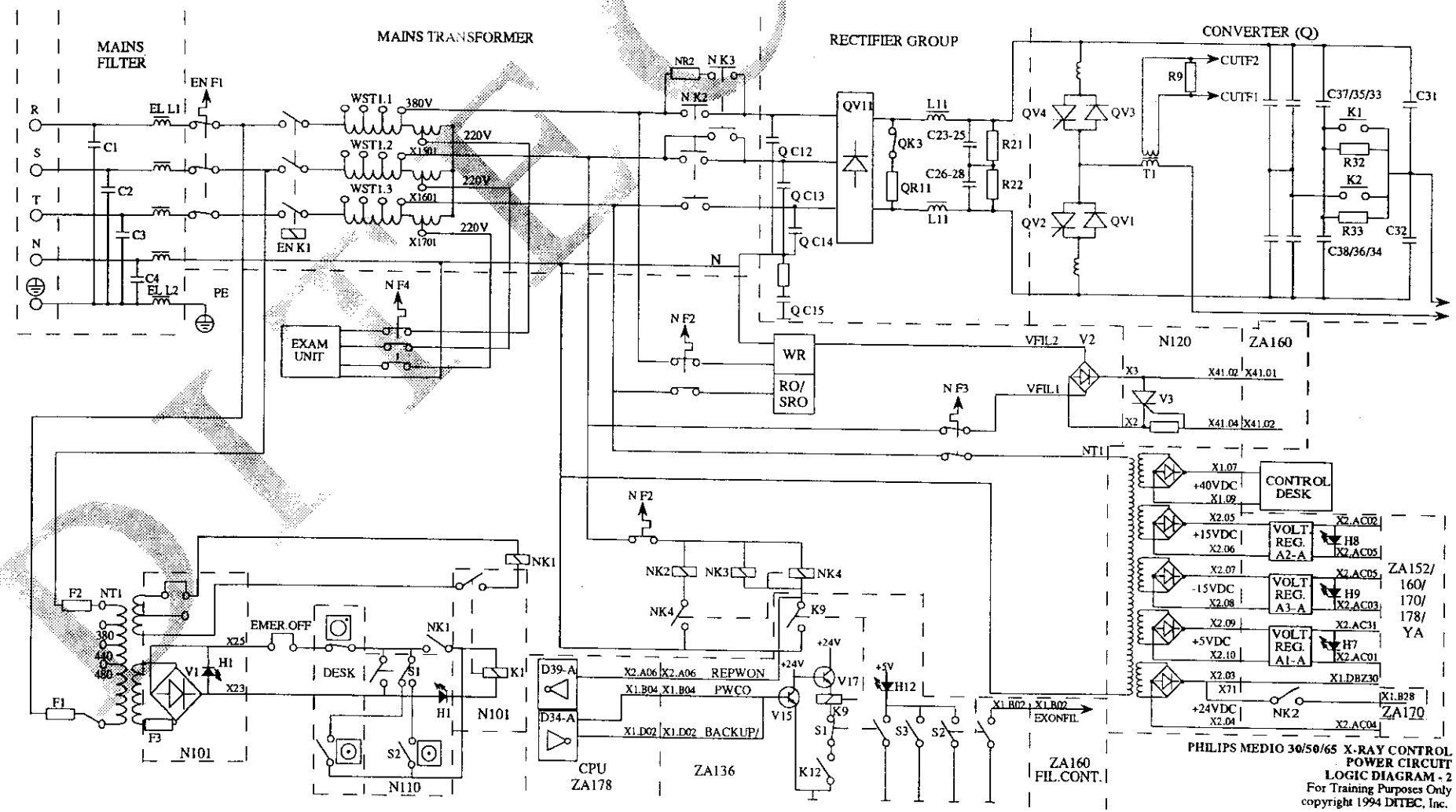
MAINS FILTER
MAINS TRANSFORMER
RECTIFIER GROUP
CONVERTER (Q)
R
S
T
N
PE
EN F1
EL L1
EL L2
C1
C2
C3
C4
EN K1
WST1.1
WST1.2
WST1.3
380V
220V
X1501
X1601
X1701
N F4
EXAM UNIT
NR2
N K3
N K2
Q C12
Q C13
Q C14
Q C15
QV1
L11
QK3
QR11
C23-25
C26-28
R21
R22
QV4
QV3
QV2
QV1
R9
CUTF2
CUTF1
T1
C37/35/33
C31
K1
R32
K2
R33
C32
C38/36/34
N F2
WR
RO/ SRO
N F3
VFIL2
V2
VFIL1
V3
X3
X2
X41.02
X41.01
X41.04
X41.02
N120
ZA160
NT1
CONTROL DESK
X1.07
+40VDC
X1.09
X2.05
+15VDC
X2.06
X2.07
-15VDC
X2.08
X2.09
+5VDC
X2.10
X2.03
X71
+24VDC
X2.04
VOLT. REG. A2-A
VOLT. REG. A3-A
VOLT. REG. A1-A
X2.AC02
H8
X2.AC05
X2.AC05
H9
X2.AC03
X2.AC31
H7
X2.AC01
X1.DBZ30
X1.B28
NK2
X2.AC04
ZA152/ 160/ 170/ 178/ YA
ZA170
F2
NT1
380
440
480
V1
H1
X23
F1
F3
N101
EMER.OFF
X25
DESK
S1
S2
NK1
K1
N110
D39-A
D34-A
CPU ZA178
X2.A06 X2.A06 REPWON
X1.B04 X1.B04 PWCO
X1.D02 X1.D02 BACKUP/
ZA136
+24V
V17
V15
K9
K12
+5V
H12
S1
S3
S2
X1.B02 X1.B02
EXONFIL
ZA160 FIL.CONT.
NK3
NK4
PHILIPS MEDIO 30/50/65 X-RAY CONTROL
POWER CIRCUIT
LOGIC DIAGRAM - 2
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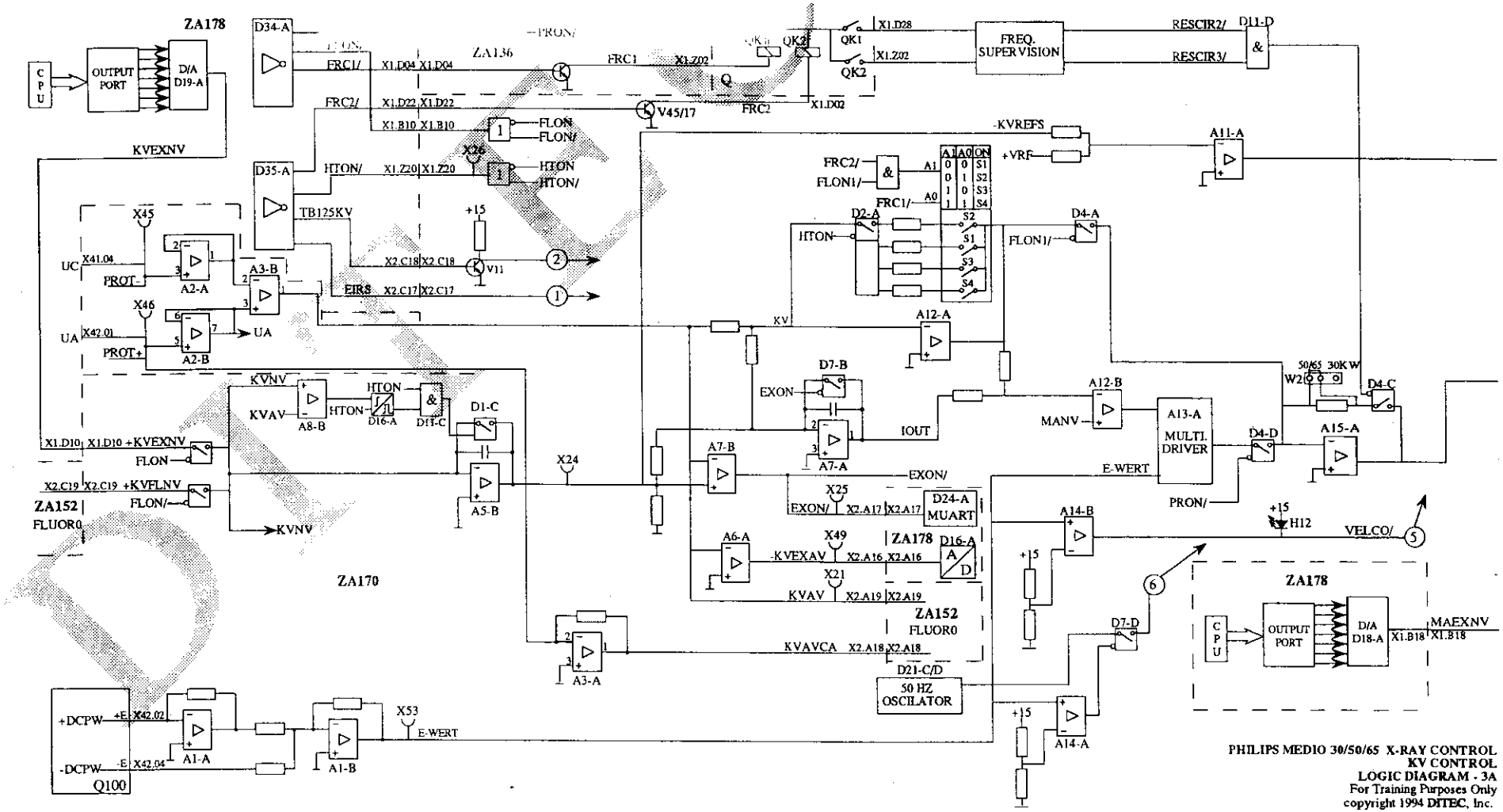

PHILIPS MEDIO 30/50/65 X-RAY CONTROL
KV CONTROL
LOGIC DIAGRAM - 3A
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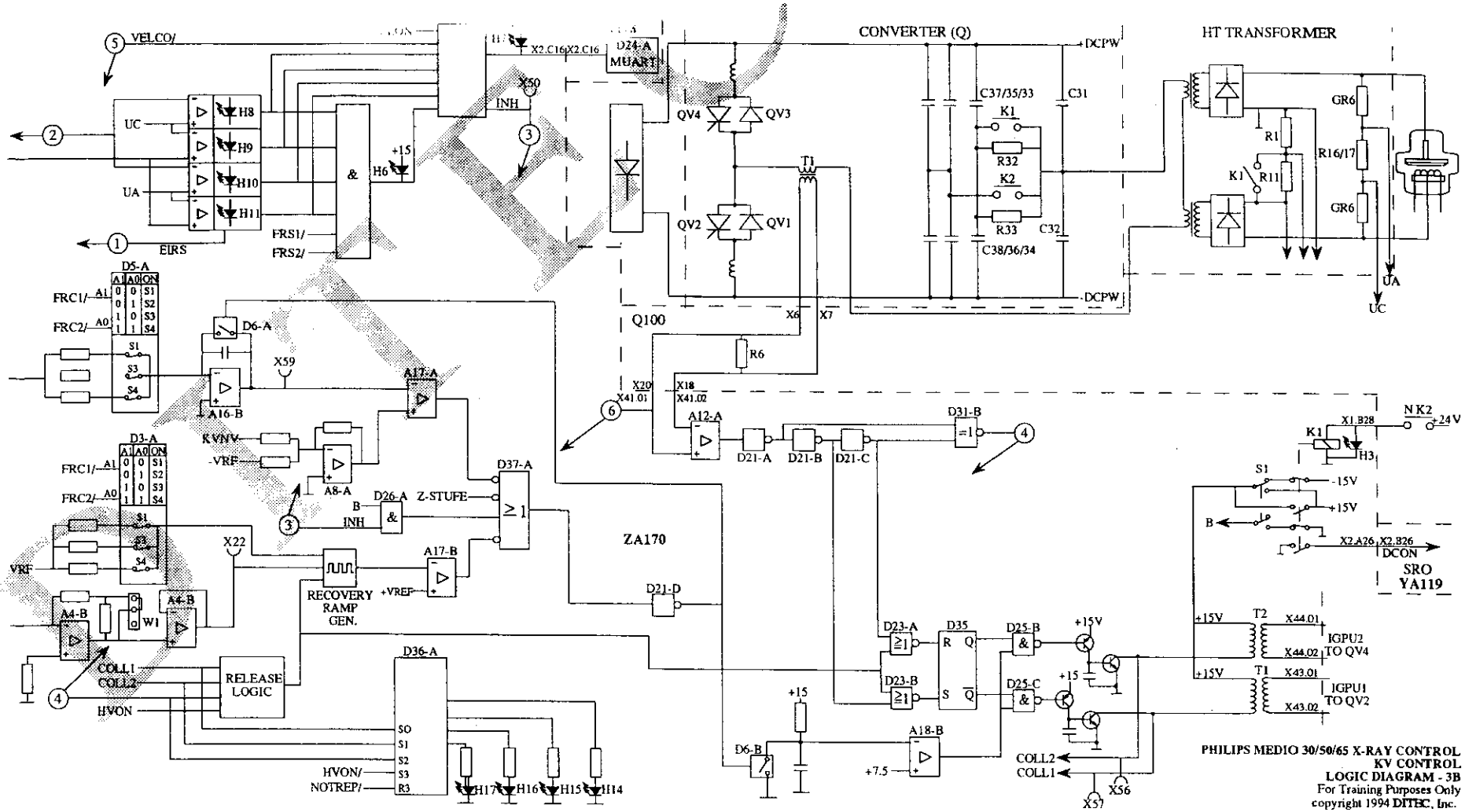

PHILIPS MEDIO 30/50/65 X-RAY CONTROL
KV CONTROL
LOGIC DIAGRAM - 3B
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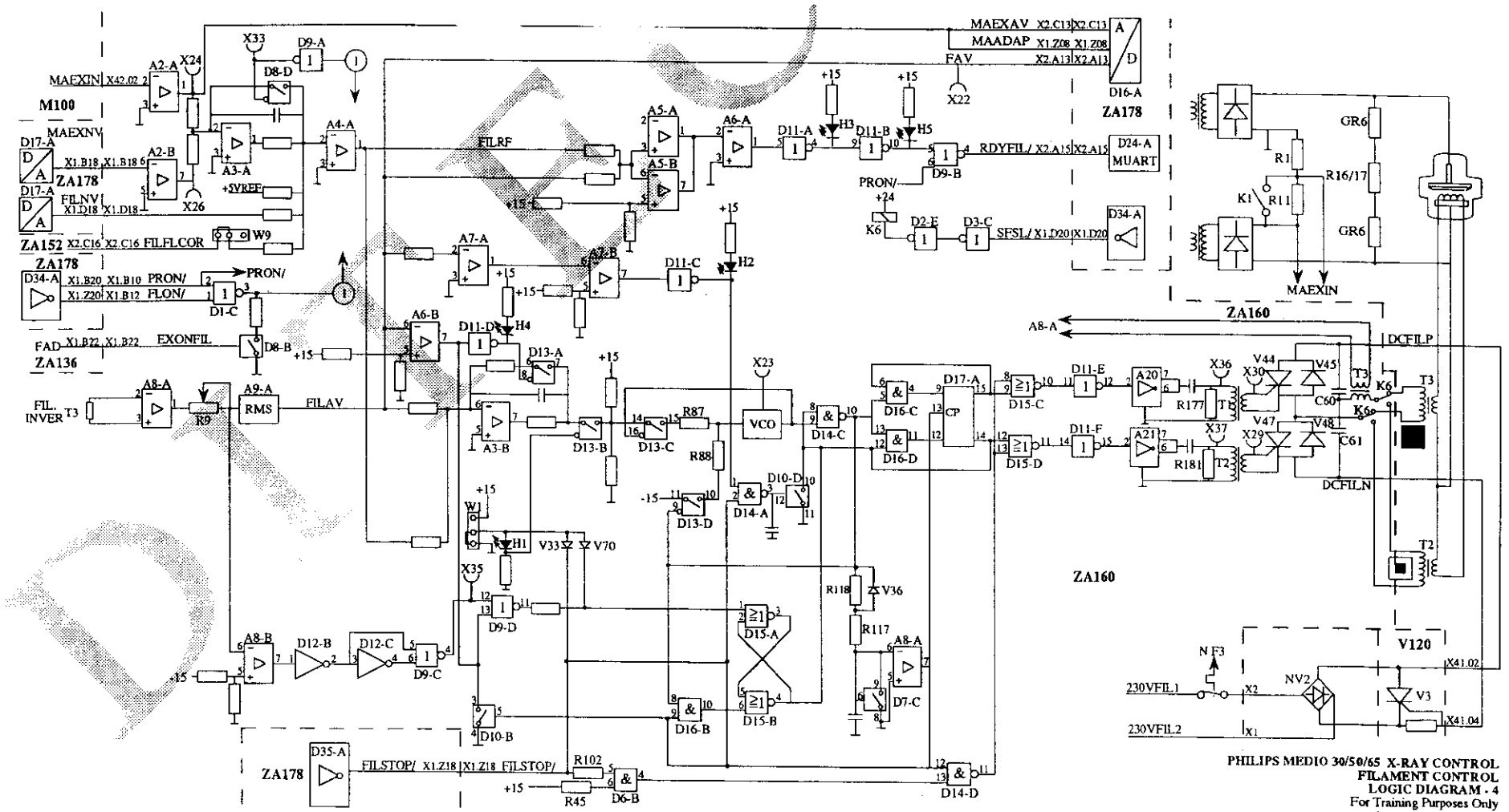

PHILIPS MEDIO 30/50/65 X-RAY CONTROL
FILAMENT CONTROL
LOGIC DIAGRAM - 4

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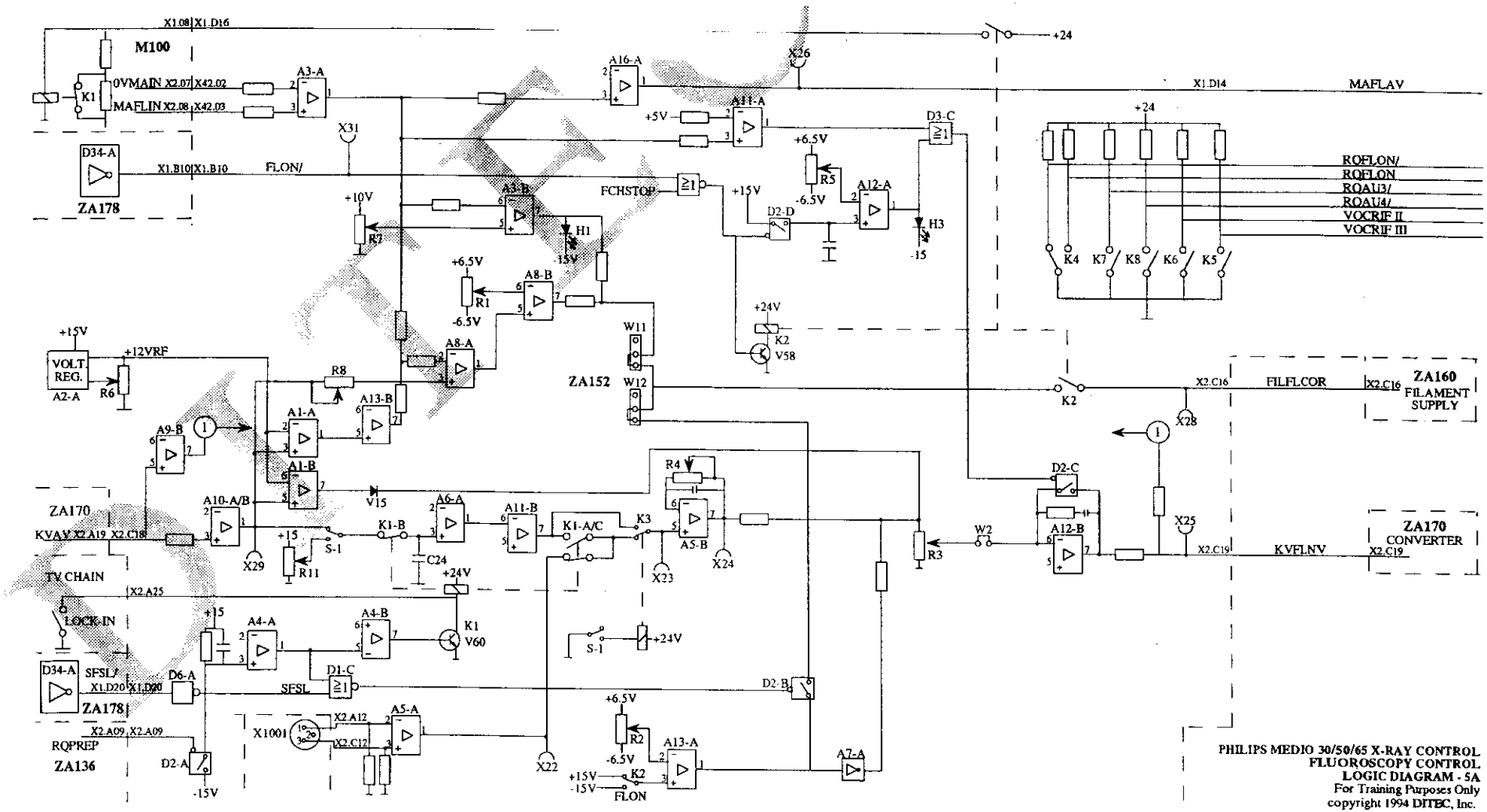
M100
ZA178
ZA152
ZA160
FILAMENT SUPPLY
ZA170
CONVERTER
ZA136
MAFLAV
ROFLON/
ROFLON
ROAU3/
ROAU4/
VOCRIF II
VOCRIF III
FILFLCOR
KVFLNV
FLON/
FCHSTOP
SFSL/
SFSL
LOCK-IN
TV CHAIN
RQPREP
FLON
VOLT REG.
+12VRF
PHILIPS MEDIO 30/50/65 X-RAY CONTROL
FLUOROSCOPY CONTROL
LOGIC DIAGRAM - 5A
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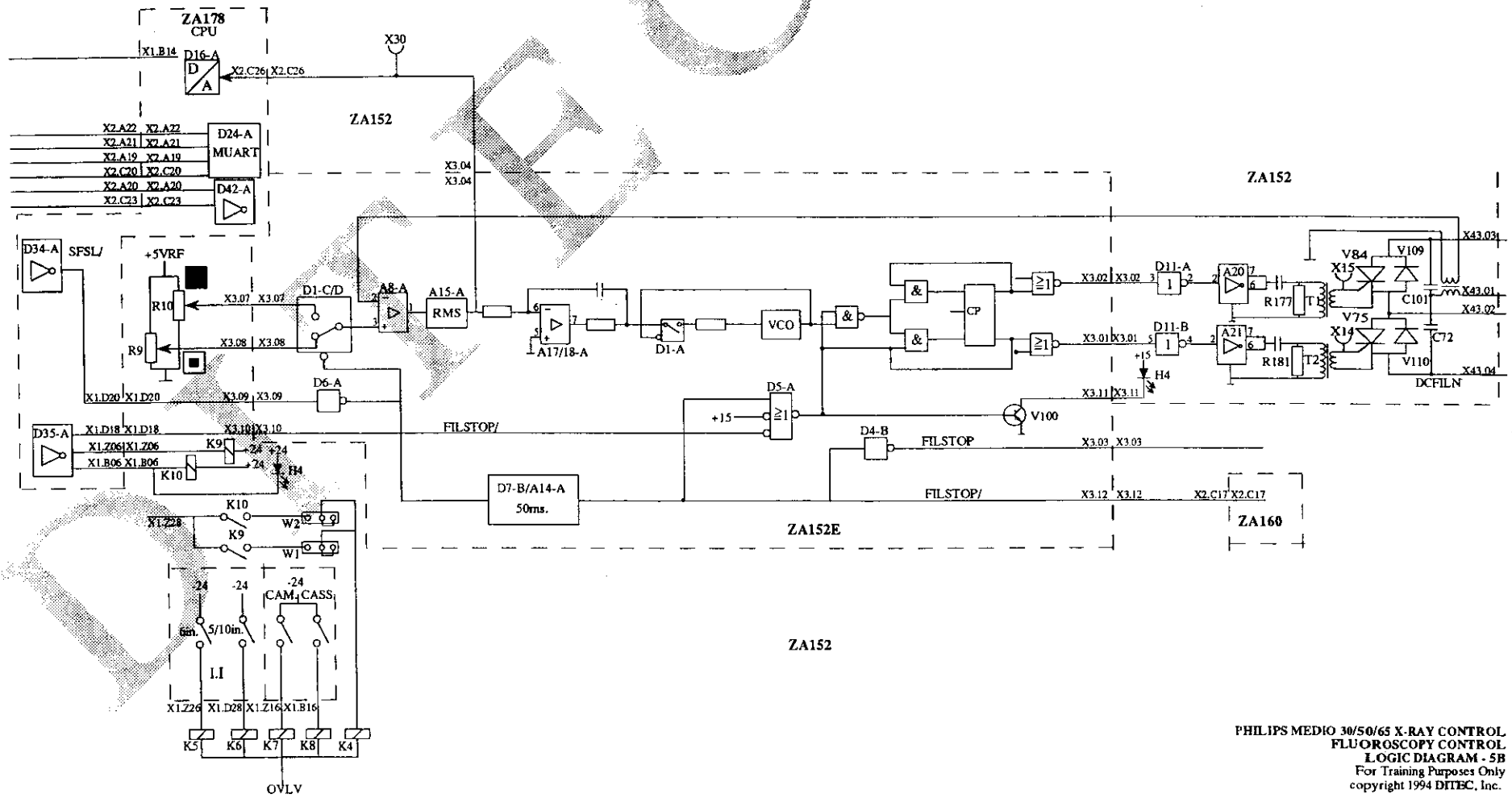

PHILIPS MEDIO 30/50/65 X-RAY CONTROL
FLUOROSCOPY CONTROL
LOGIC DIAGRAM - 5B
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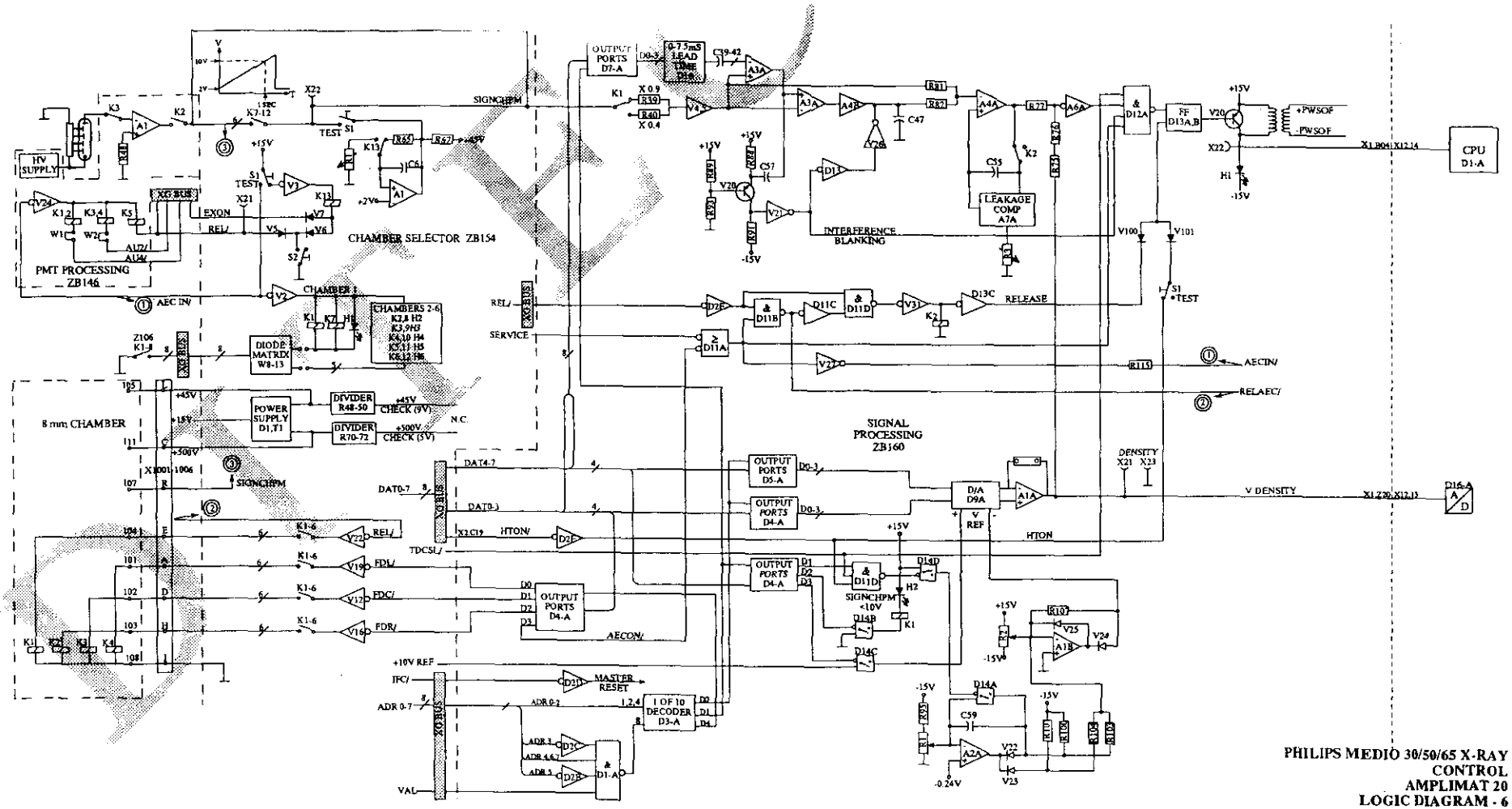

PHILIPS MEDIO 30/50/65 X-RAY CONTROL
AMPLIMAT 20
LOGIC DIAGRAM - 6

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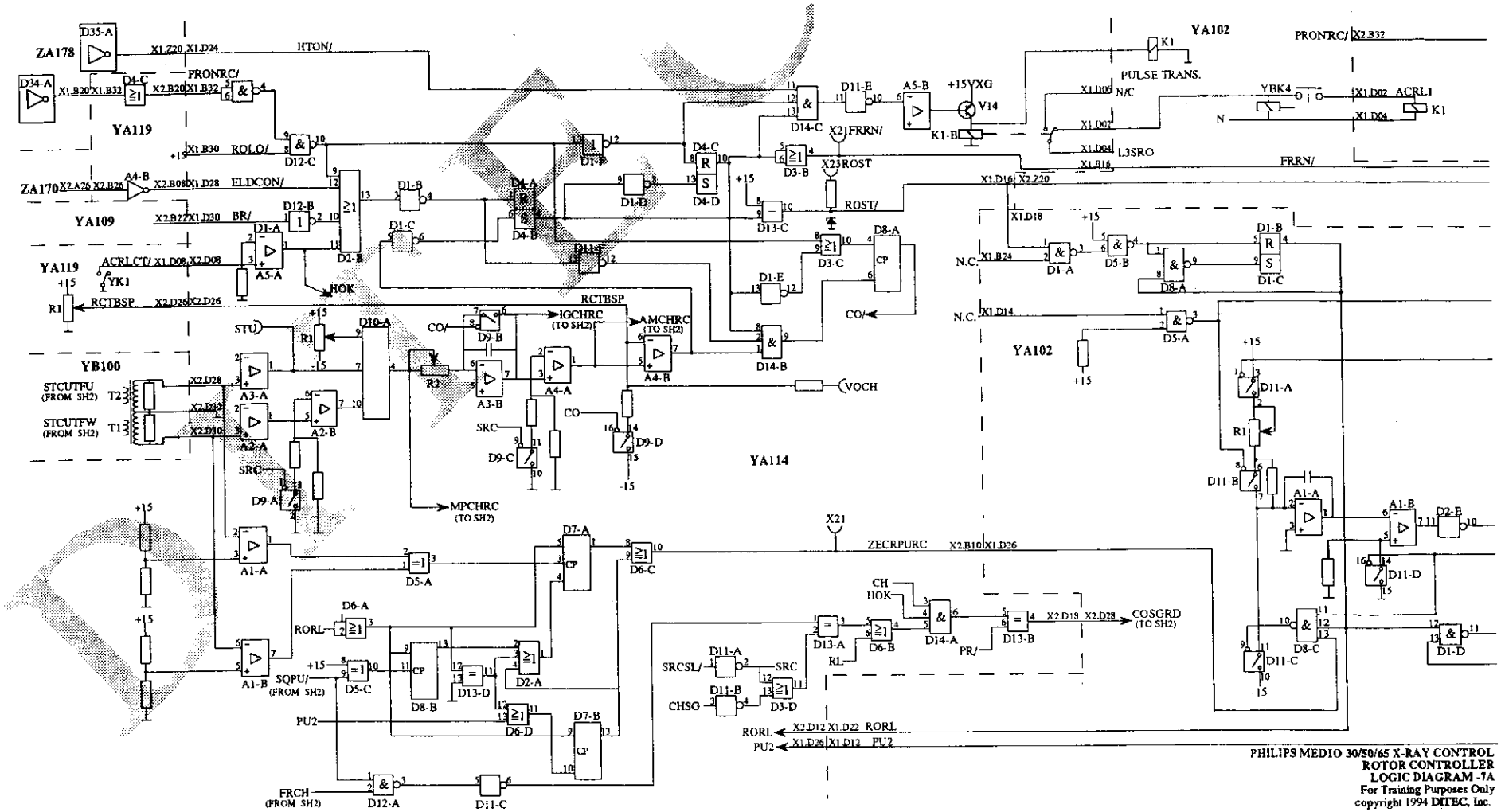
ZA178
YA119
ZA170
YA109
YA119
YB100
YA114
YA102
YA102
HTON/
PRONRC/
ROLO/
ELDCON/
BR/
ACRLCT/
YK1
RCTBSP
HOK
STU
STCUTFU (FROM SH2)
STCUTFW (FROM SH2)
T2
T1
CO/
IGCHRC (TO SH2)
AMCHRC (TO SH2)
MPCHRC (TO SH2)
VOCH
CO
SRC
RORL
SQPU/ (FROM SH2)
PU2
FRCH (FROM SH2)
ZECRPURC
CH
HOK
PR/
COSGRD (TO SH2)
SRCSL/
CHSG
RORL
PU2
PULSE TRANS.
PRONRC/
YBK4
ACRL1
L3SRO
FRRN/
ROST/
N/C
N
N.C.
PHILIPS MEDIO 30/50/65 X-RAY CONTROL
ROTOR CONTROLLER
LOGIC DIAGRAM -7A
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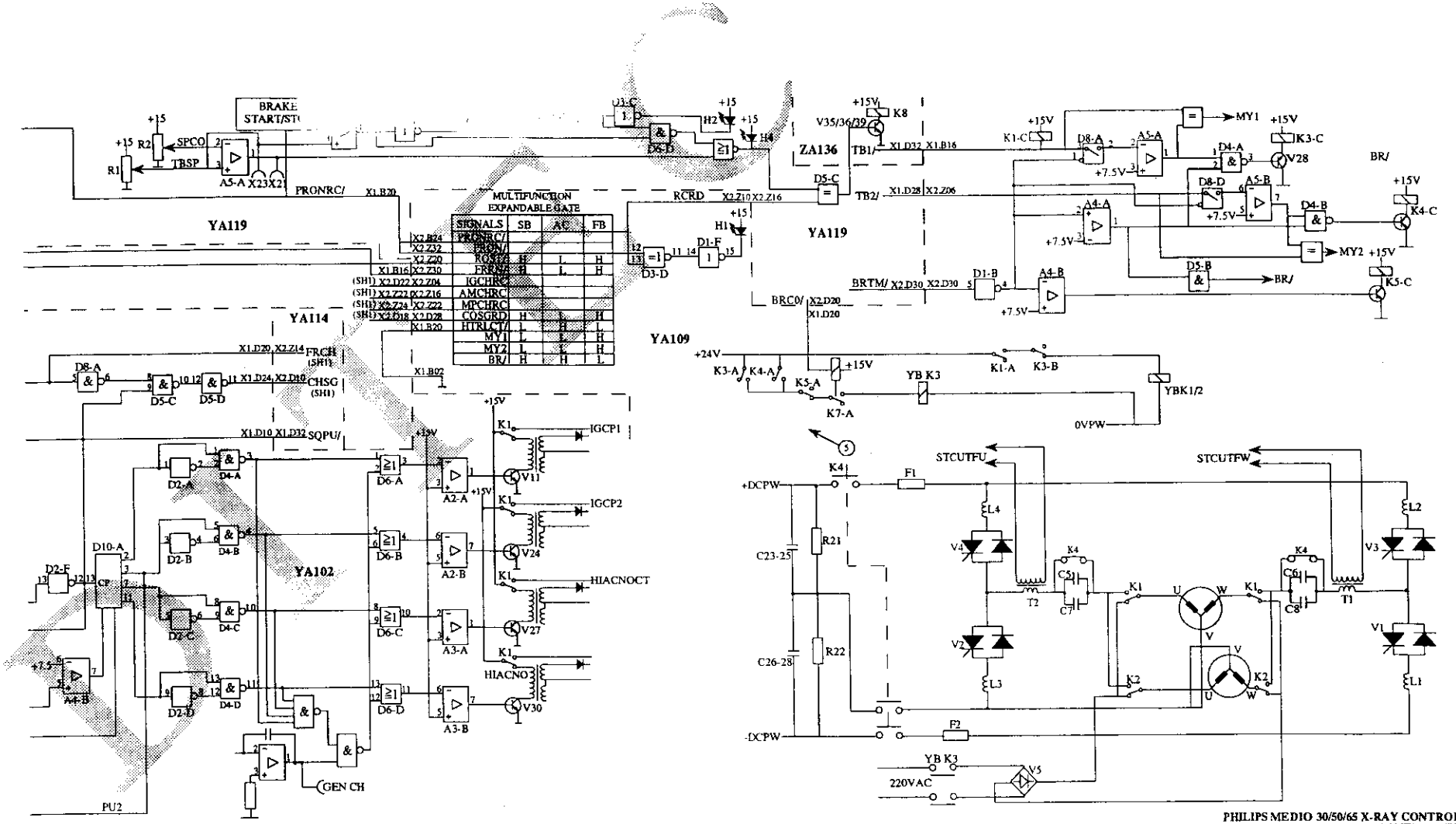

PHILIPS MEDIO 30/50/65 X-RAY CONTROL
ROTOR CONTROLLER
LOGIC DIAGRAM - 7B

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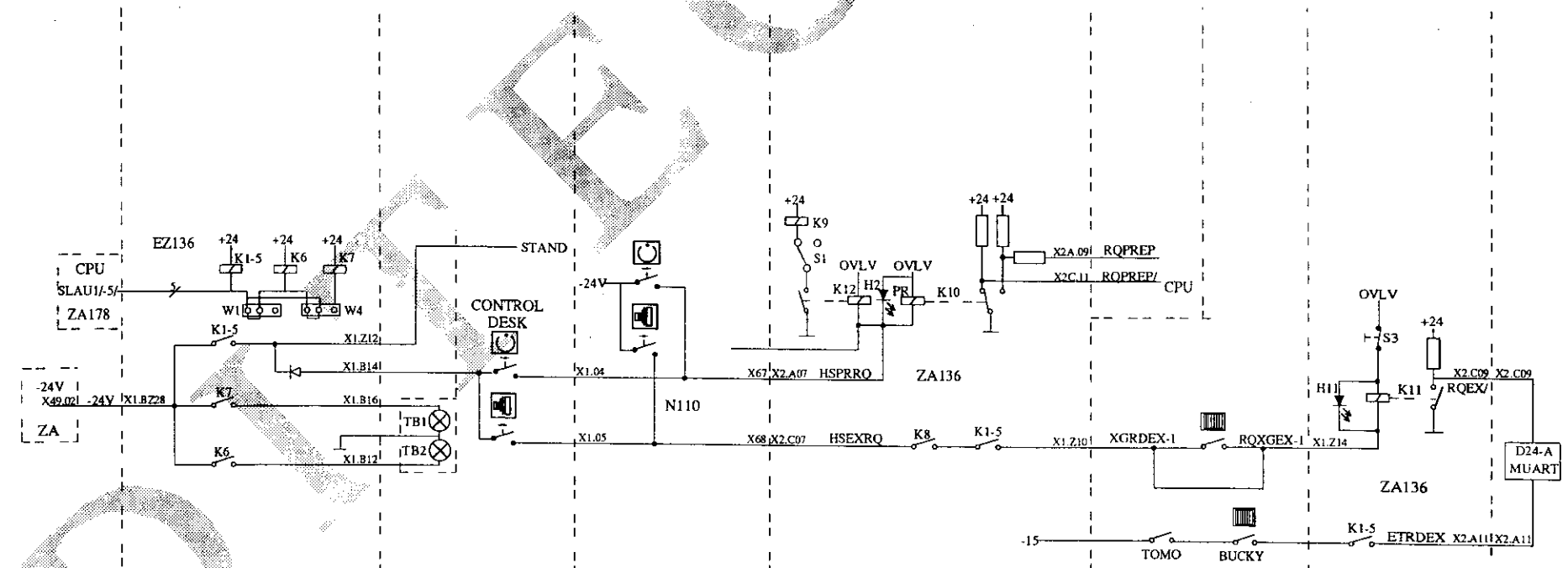

PHILIPS MEDIO 30/50/65X-RAY CONTROL
EXPOSURE CONTROL
LOGIC DIAGRAM - 8

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ERROR CODE LIST

ERROR #	STATUS	DESCRIPTION
E000	INIT 0	RAM CHIP ERROR
E010	INIT 0	CPU DEFECTIVE
E020	INIT 0	EPROM, CHECKSUM ERROR
E100	INIT 0	WATCHDOG ERROR
E110	INIT 0	BINARY CHANNEL 1
E111	INIT 1	BINARY CHANNEL 1
E112	INIT 2	BINARY CHANNEL 1
E113	STANDBY	BINARY CHANNEL 1
E114	FLUORO	BINARY CHANNEL 1
E115-6	PREP	BINARY CHANNEL 1
E117-9	EXP	BINARY CHANNEL 1
E11A-E	APR	BINARY CHANNEL 1
E120	INIT 0	BINARY CHANNEL 2
E121	INIT 1	BINARY CHANNEL 2
E122	INIT 2	BINARY CHANNEL 2
E123	STANDBY	BINARY CHANNEL 2
E124	FLUORO	BINARY CHANNEL 2
E125-6	PREP	BINARY CHANNEL 2
E127-9	EXP	BINARY CHANNEL 2
E12A-E	APR	BINARY CHANNEL 2
E130	INIT 0	XGB BUS DATA
E131	INIT 0	APR CHECKSUM ERROR
E133	STANDBY	APR CHECKSUM ERROR
E134	FLUORO	APR CHECKSUM ERROR
E13C-E	APR	APR CHECKSUM ERROR
E140	INIT 0	NO EOC SIGNAL IN ADC
E141	INIT 1	DENSITY VALUE VARIED
E143	STANDBY	DENSITY VALUE VARIED
E144	FLUORO	DENSITY VALUE VARIED
E14A-B	APR	DENSITY VALUE VARIED
E150	INIT 0	ADC TOLERANCE ERROR
E151	INIT 1	ADC TOLERANCE ERROR
E152	INIT 2	ADC TOLERANCE ERROR
E153	STANDBY	ADC TOLERANCE ERROR
E154	FLUORO	ADC TOLERANCE ERROR
E155-6	PREP	ADC TOLERANCE ERROR
E157-9	EXP	ADC TOLERANCE ERROR
E15A-E	APR	ADC TOLERANCE ERROR
E160	INIT 0	MUART/INTERRUPT/TIMER
E178	EXP	BACKUP TIMER STOPS EXP

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ERROR #	STATUS	DESCRIPTION
E21X-22X		NO DESK CONNECTION
E33X	STANDBY, FLUORO	REPWON NOT OK
E335	PREP	REPWON NOT OK
E33A-E	APR	REPWON NOT OK
E413	STANDBY	DENSITY VOLTAGE ERROR
E414	FLUORO	DENSITY VOLTAGE ERROR
E420	INIT 0	XGB LOG ERROR
E421	INIT 1	XGB LOG ERROR
E422	INIT 2	XGB LOG ERROR
E423	STANDBY	XGB LOG ERROR
E424	FLUORO	XGB LOG ERROR
E433	STANDBY	XGB LOG ERROR IN PD INTERFACE 100
E435	PREP	XGB LOG ERROR IN PD INTERFACE 100
E437-9	EXP	XGB LOG ERROR IN PD INTERFACE 100
E513	STANDBY	CONVERTER NOT READY
E514	FLUORO	CONVERTER NOT READY
E515	PREP	CONVERTER NOT READY
E517	EXP	CONVERTER NOT READY
E51A-E	APR	CONVERTER NOT READY
E523	STANDBY	EXON = 1 BEFORE EXP
E525	PREP	EXON = 1 BEFORE EXP
E52A-E	APR	EXON = 1 BEFORE EXP
E538	EXP	KV BEYOND TOLERANCE
E549	EXP	KV 50MS AFTER EXP STOP
E554	FLUORO	KV EXCEEDS 130 KV
E567-9	EXP	NO EXON 30MS AFTER HTON
E613	STANDBY	FILAMENT CIRCUIT READY
E614	FLUORO	FILAMENT CIRCUIT READY
E615	PREP	FILAMENT CIRCUIT READY
E617	EXP	FILAMENT CIRCUIT READY
E61A-3	APR	FILAMENT CIRCUIT READY
E624	FLUORO	MA BEYOND TOLERANCE
E628	EXP	MA BEYOND TOLERANCE
E633	STANDBY	FILAMENT CURRENT BEYOND TOLERANCE
E634	FLUORO	FILAMENT CURRENT BEYOND TOLERANCE
E635-6	PREP	FILAMENT CURRENT BEYOND TOLERANCE
E638	EXP	FILAMENT CURRENT BEYOND TOLERANCE
E63A-E	APR	FILAMENT CURRENT BEYOND TOLERANCE

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ERROR #	STATUS	DESCRIPTION
E713	STANDBY	SRO NOT AT STANDBY
E715	PREP	SRO NOT AT STANDBY
E723	STANDBY	SRO BRAKE MALFUNCTION
E72A-E	APR	SRO BRAKE MALFUNCTION
E733	STANDBY	SRO BRAKE MALFUNCTION
E73A-E	APR	SRO BRAKE MALFUNCTION
E745	PREP	RDY ROT NOT ON AFTER 2 SEC
E755	PREP	RDY ROT ON AFTER 330 MS IN PREP
E95X	STANDBY	STANDBY FIL. CURRENT BEYOND +/- 15%
E95A-3	APR	STANDBY FIL. CURRENT BEYOND +/- 15%
EA12	INIT 2	NO EXAM/AUX UNIT SELECTED
EA1A	APR	NO EXAM/AUX UNIT SELECTED
EA21	INIT 1	NO EXAM/AUX UNIT SELECT POSSIBLE
EA2A	APR	NO EXAM/AUX UNIT SELECT POSSIBLE
EA82	INIT 2	RQ PREP NOT STABLE
EA83	STANDBY	RQ PREP NOT STABLE
EA84	FLUORO	RQ PREP NOT STABLE
EA85-6	PREP	RQ PREP NOT STABLE
EA87-8	EXP	RQ PREP NOT STABLE
EA93	STANDBY	RQ FLON NOT STABLE
EA94	FLUORO	RQ FLON NOT STABLE
EA95-6	PREP	RQ FLON NOT STABLE
EB03	STANDBY	ESID SWITCH OPEN
EB0A-E	APR	ESID SWITCH OPEN
EB10	INIT 0	SWITCH PRESSED UPON INIT OR CHANGE OF AUX
EB13	STANDBY	SWITCH PRESSED UPON INIT OR CHANGE OF AUX
EB14	FLUORO	SWITCH PRESSED UPON INIT OR CHANGE OF AUX
EB28	PREP	4 SEC OR 600 MAS IN AEC EXP
EB33	STANDBY	THOL
EB3A-E	APR	THOL
EB46	PREP	50 KW AND PRON ACTIVE > 30 SEC
EB49	EXP	50 KW AND PRON ACTIVE > 30 SEC
EB54	FLUORO	BUZZER RESET NOT WITHIN < 5 MIN

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ERROR #	STATUS	DESCRIPTION
EC15	EXP	PD 100 NOT READY OR NOT IN PARK POSITION
EC17	EXP	PD 100 SCAN CALCULATION NOT END BEFORE SCAN BOOST TIME
EC27	EXP	LOWER MEASURE POT NOT REACHED IN 300 MS AFTER START
EC37	EXP	UPPER SCAN POSITION NOT REACHED 400 MS AFTER TEST EXP
EC48	EXP	UPPER MEASURE POSITION NOT REACHED 300 MS AFTER START OF TEST EXPOSURE
EC58	EXP	LOWER SCAN POSITION NOT REACHED IN 1000 MS AFTER START
EC67-8	EXP	PD 100 OPERATION TERMINATED PREMATURELY
EF		SAME AS EB
SFA 1 (IN FLUORO KV DISPLAY)		STAND FAILURE, HHS CONTACT RELEASE DECADE (AUX 1-4)

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HIGH FREQUENCY KV CIRCUITS

The following figure demonstrates the concepts of high frequency circuits.

The power supply provides the operating voltage for the circuit. By turning on SCR1 and SCR4 current flows through the resistor in one direction. Once the capacitor C is charged current stops and the magnetic field around the coil L collapses keeping current flowing in the same direction. Then the capacitor discharges through the diode CR1 and CR4 turning off the SCR's and causing the ringing apparent in the waveform.

The process is repeated with the other set of SCR's for the negative part of the waveform. This circuit is called high frequency because the natural frequency of the shut off is generally high, therefore the firing of the SCR's can be controlled at some high frequency. Since this is a self shutting off circuit, it is short circuit proof. It is not open circuit proof since the coil must discharge, even across an open circuit. This would cause damage to the circuitry.

By controlling the frequency at which the SCR's are turned on, the average current through L can be controlled. If we connect filaments or the high voltage transformer to the secondary of L, the mA or KV can be controlled.

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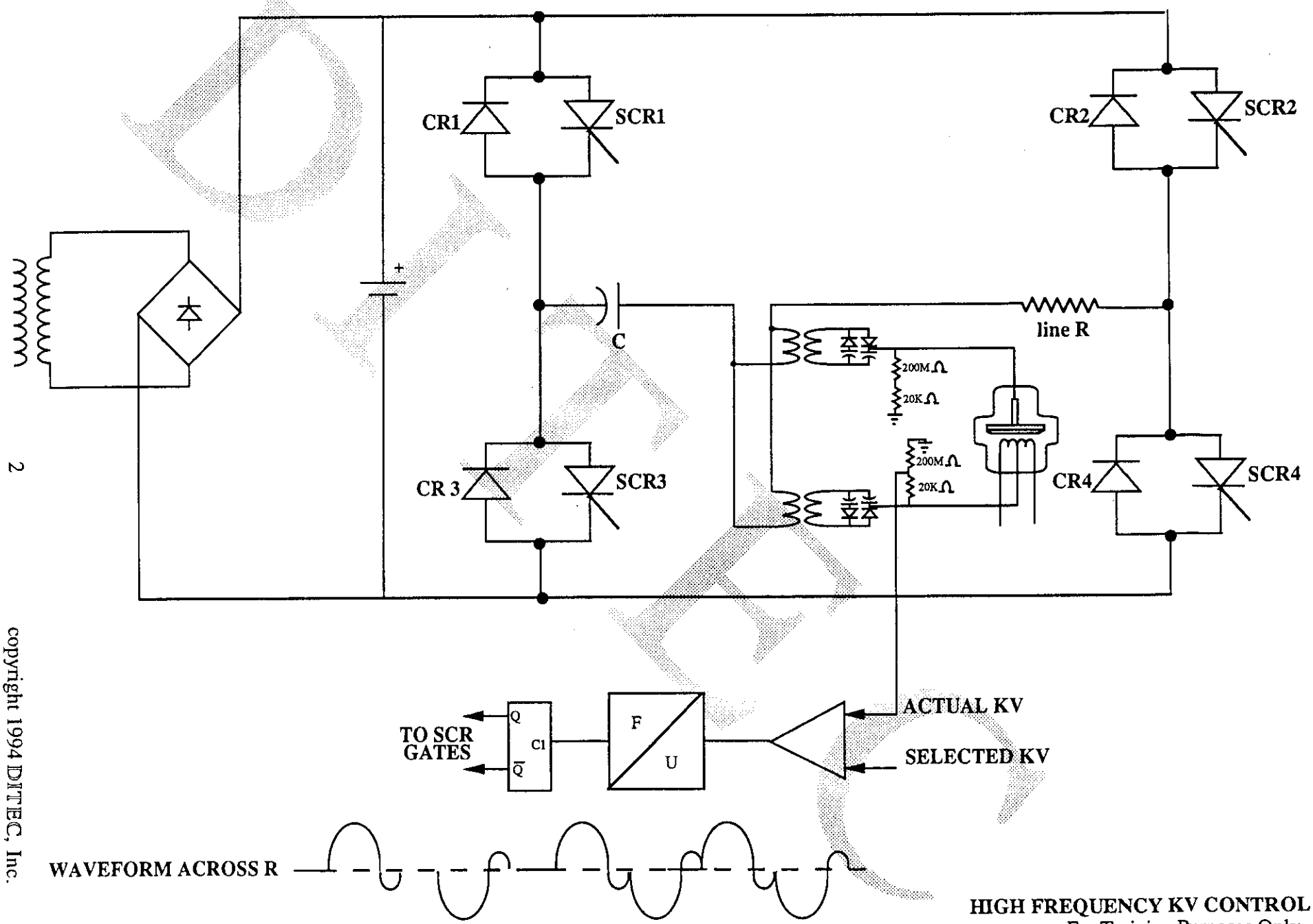

HIGH FREQUENCY KV CONTROL

For Training Purposes Only

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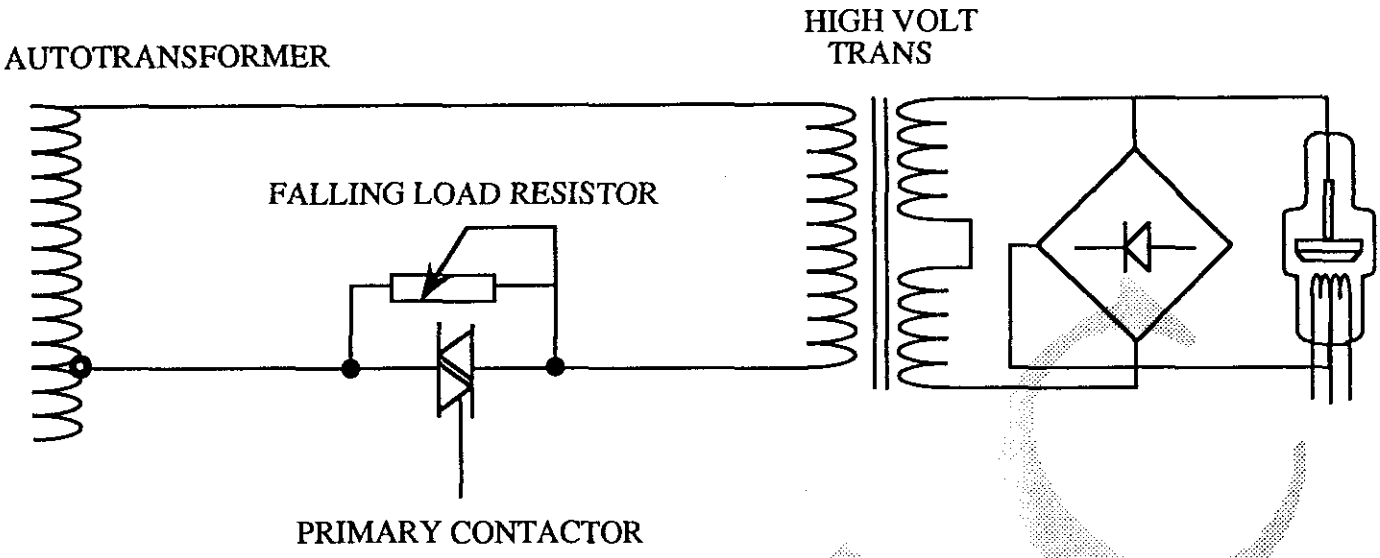

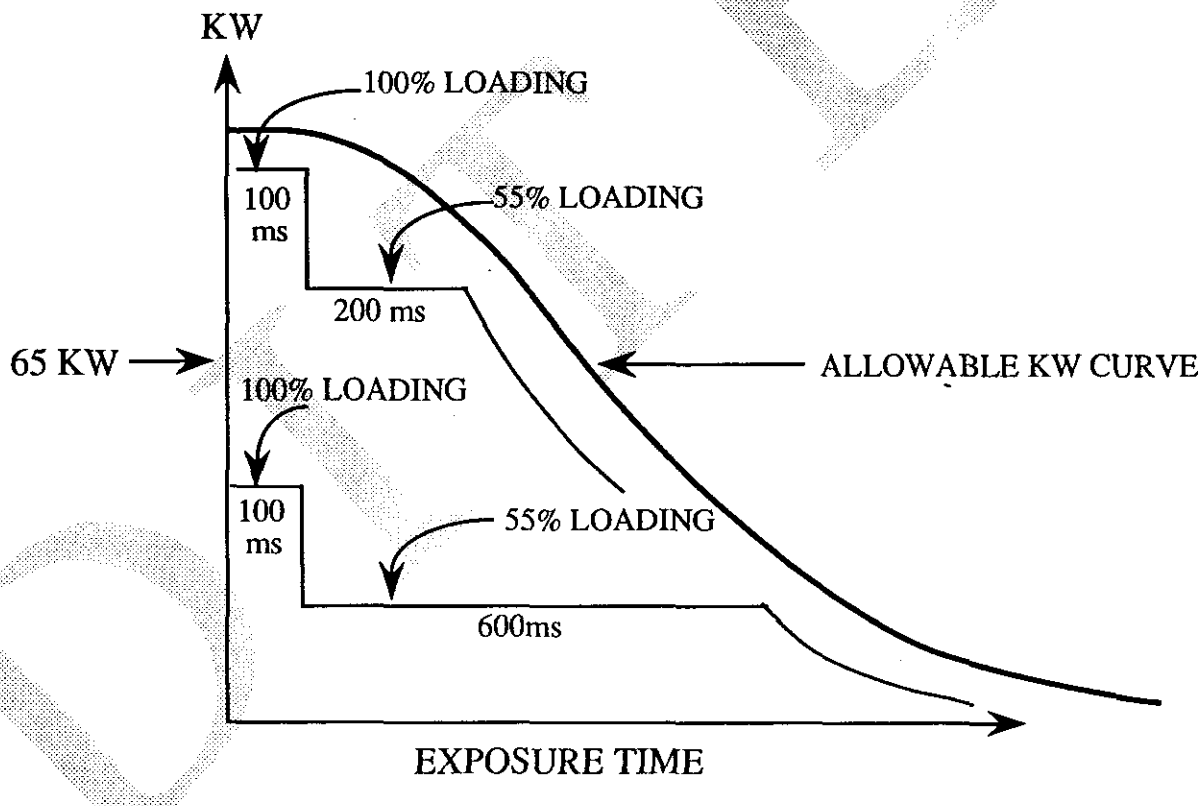

PHILIPS MEDIO 30/50/65
FALLING LOAD CONCEPTS
For Training Purposes Only
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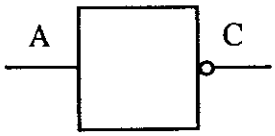
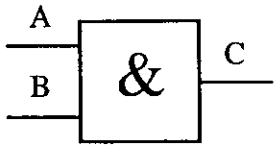
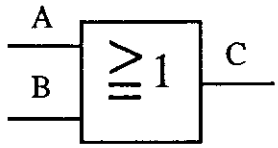
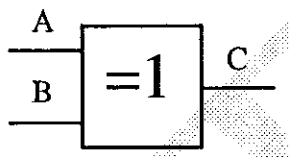
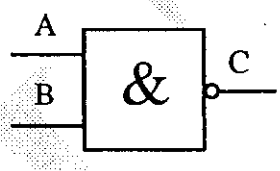
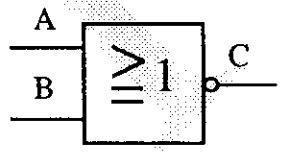
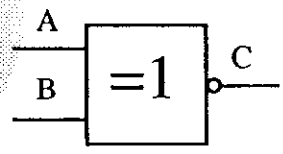
LOGIC SYMBOLS

OPERATION	SYMBOLS	INPUT CONDITIONS	OUTPUT
NOT		A=1	C=0
AND		A=1 and B=1	C=1
OR		A=1 or B=1	C=1
EX-OR		A=1 and B=0 or A=0 and B=1	C=1
NAND		A=1 and B=1	C=0
NOR		A=1 or B=1	C=0
EX-NOR		A=1 and B=0 or A=0 and B=1	C=0

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SWITCHES AND CONTROLS

ON - MAINS

OFF- MAINS

ON - Auxiliary Circuits

PREP

OFF - Auxiliary Circuits

Increase or decrease of a value without steps

Increase or decrease of a value with steps

Increase or decrease of a value without steps - rotary

Increase or decrease of a value with steps - Rotary

Increase or decrease of a value with On/Off - Rotary

START - Initiate

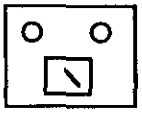
STOP - Terminate

Manual Operation

Automatic Operation

Handswitch

Footswitch


Operation from a control - Console

RAD, FLUORO, FOCUS, PATIENT TYPE, GRIDS

Direct Radiography

Indirect Radiography - Formerly all Radiography

Fluoroscopy

Micro focus

Small Focus

Large Focus

Fat Patient

Average Patient

Thin Patient

Stationary Grid

Moving Grid

Without Grid

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TABLES MECHANICAL MOVEMENT

Table Tilting About a Horizontal axis

Table Tilt to Upright

Table Tilt to Horizontal

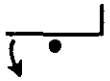
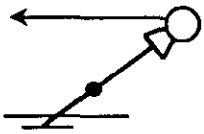


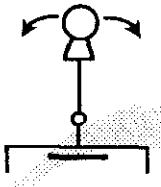
Table Tilt Head Down

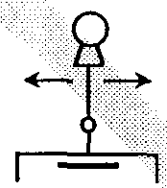
Table Top Rotating About its Longitudinal Axis

Raise Table Top

Lower Table Top


Tomography (Planigraphy)


Oblique Setting of Tomo Unit

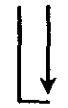

Longitudinal Movement of Tomo Unit

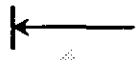
Setting Slice Level

Adjust Slice in Direction of Arrow

Move Tabletop or Footrest Longitudinally

Move Footrest Toward Head


Move Footrest Toward Foot


Movement in Direction of Arrow to a Limit

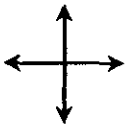
Movement in Direction of Arrow Away from a Limit

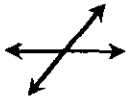
Movement in Direction of Arrow

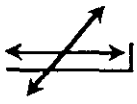
Movement in Two Directions

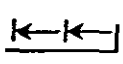
Movement in Two Directions vertically

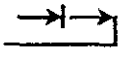
Movement in Two Directions to and from the Operator


Movement in Four Directions Vertical and Horizontal


Movement in Four Directions Horizontal


Free Movement of Tabletop in Four Directions - Floating


Stepped Tabletop Movement Toward the Head


Stepped Tabletop Movement Toward the Feet

Rotation In Two Directions Pendulum

Rotation In Two Directions About an Axis

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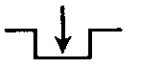
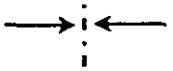
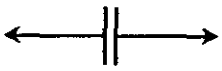
TABLES MECHANICAL MOVEMENT cont'd


Lock Engaged

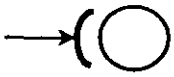
Lock Disengaged

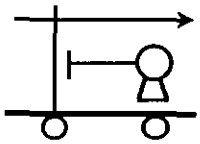
Clamp, Secure, Press


Move to Center - Center Lock

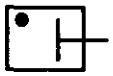

Release

Brake On


Brake Off


Transport of Mobile X-ray Units

AUTOMATIC EXPOSURE CONTROL (IONTOMAT)


Iontomat Chamber

Density (Blackening)

Three Field Chamber - Selected Field (Dominant) will be Filled In or Roman Numerals Inserted as Required

SPOTFILM FORMAT SELECTION

Spotfilm Device

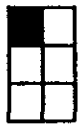
Cassette Vertical
One Exposure - Survey

Cassette Vertical
Two Exposures - Above and Below

Cassette Vertical
Two Exposures - Side by Side

Cassette Vertical
Three Exposures - Side by Side

Cassette Vertical
Four Exposures


Cassette Vertical
Six Exposures

Cassette Horizontal
One Exposure - Survey

Cassette Horizontal
Two Exposures - Side by Side

Cassette Horizontal
Three Exposures - Side by Side

Cassette Horizontal
Four Exposures

Cassette Horizontal
Six Exposures

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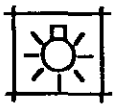
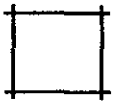
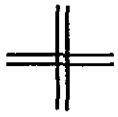
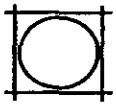
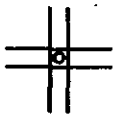
DIAPHRAGMS, CONES


Limited Field Illumination


Slot Diaphragm or Collimator Open


Slot Diaphragm or Collimator Closed

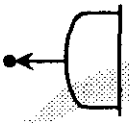

Iris Diaphragm Open

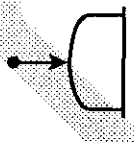

Iris Diaphragm Closed

Light Beam Indicator

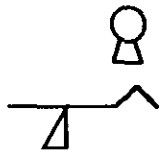
Compression Cone

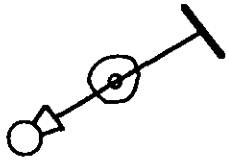
Without Compression Cone


Compression


Decompression

EXAMINATION UNITS

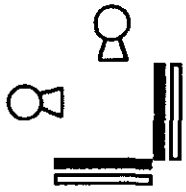

Urology Table

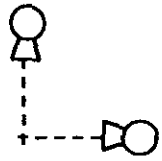

Skull Unit

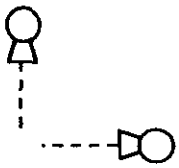
C-Arm

Mammography

Cut Film Changer, Cassette Changer - Single Plane


Cut Film Changer, Cassette Changer - Biplane


Biplane X-ray Unit, Simultaneous Exposure


Biplane X-ray Unit, Without Simultaneous Exposure

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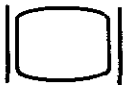
TELEVISION, IMAGE INTENSIFIERS

Television in General



TV Monitor

Monitor Brightness Control

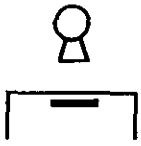
Monitor Contrast control

Image Intensifier

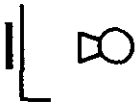
Image Intensifier - Normal Size Image

Image Intensifier - Enlarged Image

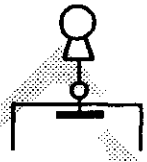
INSTALLATIONS (EXAMINATION UNITS)



Bucky Table



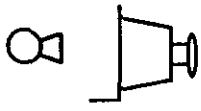
Bucky Wall Stand



Tomographic Unit (Planigraphy)

Tilting Table with Overtable Tube

Tilting Table with Undertable Tube



Photofluorographic Unit

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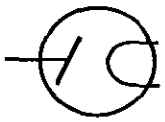
MISCELLANEOUS SYMBOLS


X-ray Tube

X-ray Tube Emitting Radiation

X-ray Tube Assembly

Timer

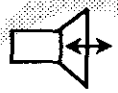
Acoustic Signal

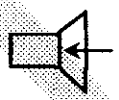
Signal Lamp

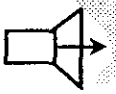
Calibration mark - Scales

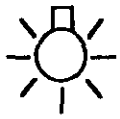
Danger Warning

Loudspeaker


Intercom


Intercom Speak

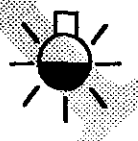

Intercom Listen


Lamp - White or Room Lighting

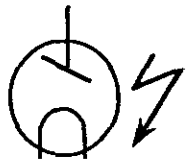
Lamp - Red for Darkroom

Lamp - Green

Lamp - Blue


Indirect Lighting - for Scales, Controls, etc.

% mA Loading


Tube Arc

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